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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/533,798

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Karri Osara

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EXAMINER

BELL, BRUCE F

ART UNIT

PAPER NUMBER

1795

NOTIFICATION DATE

DELIVERY MODE

06/09/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/533,798	Applicant(s) OSARA ET AL.	
	Examiner Bruce F. Bell	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-15, 17 and 18 is/are rejected.
- 7) ☒ Claim(s) 4 and 16 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/19/08</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Objections

1. Claims 17 and 18 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claims 17 and 18 do not further limit the electroconductive coating layer since apparatus claims rely on structure rather than methodical steps of producing. It does not appear that the different method of coating materially change the final product and therefore, the structure has not been further narrowed.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 5-15, 17, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seniuk et al (4015099) in combination with Morin et al (2002/0100694), Glefand (4043893), Deane et al (4035280) and Shibata (4246321).

Seniuk et al disclose an aluminum headbar used for an electrode plate wherein a copper contact button is placed into the ends of the headbar. See abstract and col. 2,

lines 45-56. The copper contact button is coated with a thin layer of silver. See col. 1, lines 53-56.

Seniuk et al does not disclose a metallurgical bond is formed between the aluminum support bar and the electroconductive coating material.

Morin et al disclose a substrate of aluminum or an aluminum alloy wherein a copper silver coating is applied on the aluminum to provide an improved electrical contact. See paragraph 0036.

Gelfand disclose an improved aluminum electrode hanger contact wherein the end of the hanger is drilled with external holes or slots are cut into the bar, so that Tin coated copper inserts are inserted in the slots with the inner ends thereof projecting into the hole and outer ends closely underlying or projection from the end of the hanger. Molten metal is permitted to flow into the hole filling the holed to secure the inserts to the hanger. See abstract. The hanger bar extends across the top opening of the tank and supports, and suspended into the tank is the electrode or starter sheet. The hanger bar is supported across the top of the tank on a conductor bar at one side edge of the tank and on an insulator bar on the opposite edge of the tank. See col. 3, lines 28-34. An aluminothermic process is used to fill the molten metal into the holes to secure the inserts. See col. 4, lines 23-25.

Deane et al disclose a contact bar for electrolytic cells, wherein the electrodes each have header bars and each header bar has an extending end portion which is notched on its underside. The contact bars are used in electrolytic recovery of metals such as copper and zinc. The contact bar has excellent electrical contact in notched

Art Unit: 1795

portions of the header bars. See abstract. In the electrowinning of zinc, each cathode has an aluminum header bar of rectangular cross section having two lifting lugs welded to its top and an aluminum cathode sheet welded to its bottom. The cathode sheet is intended to dip into the electrolyte cell. Each header bar extends outwardly beyond the cathode sheet on each side thereof to provide means for gravitationally supporting the cathode. A copper contact piece is welded onto one end of each cathode header bar. These contact pieces are found at the tight hand ends of the cathodes. Each contact piece is provided on its underside with an inverted V-shaped notch. See col. 3, line 53 – col. 4, line 2. The copper contact pieces should be capable of carrying full current without heating up and have a sufficient amount of metal material between the copper contact piece and the cathode header bar to prevent generation of heat at the currents for which the cell is designed. See col. 4, lines 20-27.

Shibata discloses a composite electrical contact composed of a copper base portion clad with a contact portion of Ag-SnO alloy. The contact portion and the base portions are fusion bonded by an interfacial alloy layer of Ag and Cu and an adjacent diffusion layer of Cu as a result of heat treatment of the contact at the eutectic temperature of Ag and Cu. See abstract.

The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the instant invention was made because even though the prior art of Seniuk et al does not disclose a metallurgical bond is formed between the aluminum support bar and the electroconductive coating material, the prior arts of Morin et al, Gelfand and Shibata et al all show that it is known to use such a metallurgical

Art Unit: 1795

bond to make good electrical contact and further show that materials of silver, copper and tin are known to be used to make such electrical contact and further Morin et al sets forth specifically that the silver copper alloy is used to make good electrical contact on aluminum devices. With respect to claim 3, the prior art of Shibata specifically sets out the use of copper with tin and silver to be used as an electrical contact and that this contact is a composite electrical contact. The prior arts of Deane et al, Seniuk et al and Gelfand show that the aluminum support bar is used for an electrode in an electrolysis cell where the edges of the support bar make the electrical contact with the busbar as is done in most of the conventional cells on the market. The manner in which the contact materials are deposited would be within the ability of the person having ordinary skill in the art and are considered to be conventional methods for applying such materials to surfaces. The prior art of Deane et al further sets forth that the contact pieces are provided on their undersides with a V-shaped notch and therefore, this aspect of the instant invention would have been obvious to one of ordinary skill in the art.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422

Art Unit: 1795

F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-3, 5-15, 17-18 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 2, 5-9, 11-16 of copending Application No. 10/533758. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the copending application encompass those of the instant invention. Even though the instant claims are to a highly electroconductive coating, the copending application sets forth the same materials of copper and silver or silver alloy being used to form the contact surface having good electrical conductivity and further shows that a transmission layer is disposed between the copper and the silver or silver alloy. Therefore, the copending application as instantly claims is not patentably distinct from the instant invention as instantly claimed for the reasons set forth above.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Allowable Subject Matter

6. Claims 4 and 16 are allowable over the prior art of record.

Art Unit: 1795

7. Claims 4 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record fails to teach and/or suggest an aluminum support bar that has a casing section made of some other material. Even though this concept is known with other support bars such as that of copper or stainless steel used in copper electrowinning, it is not known to put a casing on an aluminum support bar of an electrode for used for zinc electrowinning.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bruce F. Bell whose telephone number is 571-272-1296. The examiner can normally be reached on Monday-Friday 6:30 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BFB
June 5, 2008

/Bruce F. Bell/
Primary Examiner, Art Unit 1795